DATA GENERAL
CORPORATION
Southboro,
Massachusetts 01772
(617) 485-9100

TECHNICAL REFERENCE

COMMUNICATIONS CABLING

This document is designed to provide all the information required on communication interface cabling, allowing rapid and accurate configurating, ordering and installation. Appropriate cables are listed by product, and full specifications of all cables are provided.

Ordering No. 014-000014

© Data General Corporation, 1972, 1973
All Rights Reserved.

Printed in the United States of America
Rev. 02, July 1973

014-000014-02

NOTICE

Data General Corporation (DGC) has prepared this manual for use by DGC personnel and customers as a guide to the proper installation, operation, and maintenance of DGC equipment and software. The drawings and specifications contained herein are the property of DGC and shall neither be reproduced in whole or in part without DGC prior written approval nor be implied to grant any license to make, use, or sell equipment manufactured in accordance herewith.

DGC reserves the right to make changes without notice in the specifications and materials contained herein and shall not be responsible for any damages (including consequential) caused by reliance on the materials presented, including but not limited to typographical or arithmetic errors, company policy and pricing information. The information contained herein on DGC software is summary in nature. More detailed information on DGC software is available in current released publications.

SECTION 1

INTRODUCTION

WHY A NEW CABLING SCHEME?

As Data General improved its data communications capability by offering more and more complex interfaces, the number of possible cable combinations increased dramatically. Now that the interfaces are available for practically all communication applications, it is possible to look at the total cabling requirements, merging and generally simplifying the connection scheme. It is for this reason that the 1210, 1220 and 820 will have a different, and much simpler, cable structure. For example, the same cable will interconnect a modem with the 4015, 4029 and 4063 with 4026 modem control option. In addition, the requirement for the 4050/4051 and 4052 junction panel is all but eliminated for the 1210, 1220, 820 processors.

At first glance at the cables listed in this publication, it may appear that the number of cables available increased, complicating the product selection. This appearance is generated by the addition of many "adapter" cables, allowing new processors to be connected to existing equipment previously purchased from Data General.

NEW CONNECTORS

The 1210, 1220 and 820 communications systems will interface to external equipment through 13-pin connectors or a 50-pin paddle board. In the case of the 4010/4023, the connector may be gold plated pins on the backpanel. In place of the 9 or 19 pin connectors on the back of the Nova or on the 4050/4051 junction panel, sixteen 13-pin connectors (Model 4083) is mounted on the Nova chassis (See Figure 1). Standardization of pin signals drastically lowered the requirement for individual function external cables.

The 50-pin paddle board is available but should be required in special cases only. If, for example, the customer already had a 4050 or 4051 junction box for the 4026 series interfaces, the paddle board connector would be used to connect the 1210, 1220, 820 series processors to the junction panel. An external cable for this purpose is available and is discussed in this document.

In this document, cabling requirements are given separately by communication product. In addition, wiring list and pin designations are given for each internal and external cable listed.

ORDERING PROCEDURE

A. Decide on type and quantity of communication interfaces needed.

B. If 4083 16-connector assembly is desired, specify part number and full connector description.

EXAMPLE:

If configuration calls for:

4 lines 4060 TTY connection
4 lines 4063 EIA without Modem Control
4 lines 4063 EIA with Modem Control
1 line 4015 Synchronous Interface
1 line 4074 Sync./Bisync. Interface
1 line 4029 EIA Interface

The order form would be:

#4083 16-connector assembly configured as:

LINE #	DESCRIPTION
1	1st. 4060, TTY line 1 Interface
2	1st. 4060, TTY line 2 Interface
3	1st. 4060, TTY line 3 Interface
4	1st. 4060, TTY line 4 Interface
5	1st. 4063, EIA line 1 Interface
6	1st. 4063, EIA line 2 Interface
7	1st. 4063, EIA line 3 Interface
8	1st. 4063, EIA line 4 Interface
9	2nd. 4063, EIA/4026/7 Modem CTL line 1
10	2nd. 4063, EIA/4026/7 Modem CTL line 2
11	2nd. 4063, EIA/4026/7 Modem CTL line 3
12	2nd. 4063, EIA/4026/7 Modem CTL line 4
13	4015 Synchronous Interface
14	4074 Sync./Bisync. Interface
15	4029 EIA Interface
16	N/C

C. Refer to proper interface section of this document and order necessary external cables. If customer desires to provide his own cables, wiring diagrams for all cables may be found in Section 3 of this document. Appendix 1 contains Data General's and other vendor's part numbers for cable connectors.

SECTION 2

EXTERNAL CABLES BY PRODUCTS

4010/4023/4029

The 4010 TTY-20 MA interface, 4010/4023 EIA interface, and the 4010/4023/4029 EIA with modem control have four cabling/connector options for the 1210, 1220 and 820 series processors.

1) If 4010 or 4010/4023 is ordered and Slot 3 installation is specified, direct cable connection to a 12-pin back panel connector (compatible with the standard 13-pin connector) will be provided. (See Figure 1)

2) A single 13-pin connector will be provided for the 4010, 4010/4023, or 4029 interfaces when not installed in Slot 3, unless Item 3 or 4 is specified (See Figure 2)

3) 4083 - Sixteen 13-pin connectors mounted for easy access from the back of the Nova. (See Figure 1)

4) Type 4045 50-pin paddle board. (See Figure 1)

The external cables for the above options are listed in Table 1.

4015

The 4015 single line synchronous interface comes complete with all the necessary modem control circuits to connect directly to the Bell 201 or equivalent data set. An appropriate length cable must be purchased. The internal clock option 4020 is available for use in a data link without modems (local connection).

TYPE	4015	4015 with 4020
1200/800	1025-A	1050-A
1210/1220/820 with 4083	1049-G	1050-G
1210/1220/820 50-Pin Conn.	1025-B	Cable is Customer Provided.

4026

The 4026 16-line programmable asynchronous multiplexor has both TTY 20MA current loop and EIA levels which may be intermixed on the same system. The 1200 type processor normally utilizes a 4050 or 4051 type junction box with 4052-A cable which interconnects the processor chassis to the junction panel. If modem control is required, a second 4026 with 4027 options must be purchased with a second 4052 cable. External cables listed as follows must be purchased as required:

TYPE	4026 - TTY	4026 - EIA
1200	4052, 4050 junc. panel 1019-A cable (See Note 1)	4052, 4051 junc. panel 1042-A cable
1210 w/4083	1049G	1018-G
1210 w/50-Pin Conn.	4050 junc. box (See Note 3)	4051 junc. box (See Note 3)

TYPE	4026 - EIA w/Modem (See Note 2)
1200	2-4052, 4050 Control junction panel, 1018-A Cable
1210 w/4083	1018-G
1210 w/50-Pin Conn.	4051 junction box (See Note 3)

NOTE 1: Extension cable, specify 10 feet.

NOTE 2: If a second 4026 is ordered for modem control, its purpose must be specified on the purchase order.

NOTE 3: The 4052 cable is available to connect the processor with the junction panel. The cable must be ordered with the type of processor specified; i.e. 4052/1210, 4052/1220, or 4052/820.

4025

No special internal cabling instructions are required for the 4025 IBM 360/370 interface. Cabling from the processor to the bus drop assembly will be provided for the processor ordered. The cables from the bus drop assembly to the IBM channel listed below are non-DG supplied and must be provided by the customer.

PART NUMBER	DESCRIPTION
IBM-5353920	Bus/Tag (Specify length)
IBM-5351178	EPO (Specify length)
IBM-5440649	Bus Line Terminator
IBM-5440650	Tag Line Terminator

4038

The 4038 Multiprocessor Communications Adapter (MCA) requires one cable interconnecting each Nova in the system. Type 4039 cable must be purchased for this purpose and will be provided with correct connectors to mate with the processors specified.

4039

PROCESSOR TYPE	CONNECTOR
800/1200/1230	52-Pin Connector
1210/1220/820	50-Pin Edge Connector

On the 1220 or 820 processor, it is preferred to have the 4038 reside in Slot 9.

4060

The 4060 4-64 line asynchronous multiplexor provides for both 20MA TTY and EIA interface on a 4-line basis. Modem control is available using the 4026/4027, and interconnecting wiring is accomplished by internal cables.

EIA INTERFACE CIRCUITRY

		Individual Connectors	Distribution Box
Processor Model	Interface Model	4062	4063
820/1200	Conn. or Distribution Box Model No.	4-9 Pin Conn.	4051
820/1210 1220		50-Pin Paddle Board	4083, (13 Pin)

TTY INTERFACE CIRCUITRY

		Individual Connectors	Distribution Box
Processor Model	Interface Model	4060	4061
820/1200	Conn or Distribution Box Model No.	4-9 Pin Conn.	4050
820/1210 1220		50-Pin Paddle Board	4083, (13 Pin)

The above charts indicate for the Nova model type, interface, 4060 product, the type of connector provided. Now knowing the connector type, it is possible to select the proper external cable(s) from Table 2.

4073

The 4073 four-line synchronous/bisynchronous interface has only the modem control circuitry necessary for full duplex dedicated operation. For full duplex auto answer capability, a 4026 with 4027 options must be purchased. Cross connection of these two interfaces is accomplished in the internal cabling. Provision is made in the standard product as no cost for an internal transmitter clocking, which is usually used for local connection. External cable 1050 is available for this purpose. For 4073 without 4026/4027 control, necessary strapping is provided in the internal cable for full duplex, non auto-answer modems.

Processor Type	4073 EIA	4073 EIA and 4026 Modem Control*
1200/800	1025-A	1025-A
1210,1220,820 w/4083	1049-G	1049-G
1210,1220,820 w/Paddle Bd.	1025-B	User Provided

*See ordering procedure section of this document.

The following clock frequencies are available on the interface board. Frequency desired must be indicated on order form so correct internal wiring can be completed at the factory.

1200 baud
2400 baud
4800 baud
9600 baud
19.2 KC

4074

The 4074 single line synchronous/bisynchronous interface has all necessary control circuitry to interface to auto-answer four-wire half or full duplex modems. The device has a no cost internal clock option for local connection which replaces normal modem control of transmitter clock frequency. External cable 1050 is available for direct Nova to Nova installations using this clock option.

CABLES

Processor Type	4074 External Cable
1200/800	1025-A
1210/1220/820 w/4083	1049-G
1210/1220/820 w/50-Pin Paddle Board	1025-B
1200/800 Nova to Nova Internal Clock	1050-A
1210/1220/820 Nova to Nova w/Internal Clock and 4083	1050-G

TABLE 1

PROCESSOR TYPE	CONNECTOR TYPE	# of PINS	TTY (See Note 1)	EIA (See Note 2)	EIA/MODEM
1200/800	Cannon	9	1019-A	1017-A	1018-A
1210/1220/820	4083	13	1019-G	1017-G	1049-G/1048-G
1210/1220/820	Slot 3 Only Back Panel	13	1019-G	1017-G	N/A
1210/1220/820	Single Interface Connector	13	1019-G	1017-G	1049-G/1048-G
1210/1220/820	Paddle Board	50	N/A	N/A	N/A

NOTE 1: The 13-pin connector now provided with teletypes will plug directly into the 4083, or either of the single 13-pin connectors.

NOTE 2: 1017-G cable is a 13-pin to 25-pin cable for use with dedicated modems. Request to send and data terminal ready signals are strapped to +5V in the cable.

TABLE 2

EXTERNAL CABLES -- 4060 SERIES

PROCESSOR TYPE	4060 SERIES TYPE	INTERFACE CIRCUITRY	CABLE NUMBER	NOVA CONNECTOR	OTHER END CONNECTOR	PURPOSE	MATES WITH
800/1200	4060/61	TTY	1019-A	9 Pin*1	9 Pin	TTY Extension	TTY Cable
800/1200	4063	EIA	1042-A	19 Pin*2	25 Pin	Dedicated Modem*3	
800/1200	4062/3	EIA	1019-A	19 Pin	9 Pin	Adapter Cable	TTY, 1017-A Cable
800/1200	4062/3	EIA	1018-A	19 Pin	25 Pin	Auto-Ansr. Modem Cable	
800/1200	4062	EIA	1017-A	9 Pin	25 Pin	Dedicated Modem Cable	1019-A, 19 to 9 Pin Adapter
1210/1220/820	4061	TTY		13 Pin 4083	Direct Conn. to TTY	TTY Cable	
1210/1220/820	4061	TTY	1019-G	13 Pin 4083	9 Pin Cannon	13 Pin to 9 TTY Adapter Cable	Pin TTY Cable 1019-A
1210/1220/820	4063	EIA	1017-G	13 Pin 4083	25 Pin	Dedicated Modem Cable	
1210/1220/820	4063	EIA	1049-G	13 Pin 4083	25 Pin	Auto-Ans. Modem	
1210/1220/820	4063	EIA	1048-G	13 Pin 4083	19 Pin	Adapter Cable	1019-A

*1 4061 Interface on 800/1200 requires 4050 junction box and 4052-A cable. This cable mates with connectors on 4050.

*2 4063 Interface on 800/1200 requires 4051 junction box and 4052-A cable. This cable mates with connectors on 4051.

*3 Modem control lines are strapped internally in cable.

SECTION 3

INTERNAL-EXTERNAL CABLE DESCRIPTIONS

800, 1200 TYPE INTERNAL CABLES

CONN. PIN NO.	4010/4023		4029		4015		4026 (See Note)	
	FUNCTION	BK. PNL. PIN	FUNCTION	BK PNL. PIN	FUNCTION	BK PNL. PIN	4050	4051
1	+5	98	GND	1	GND	99	+5	
2	RD RN	A89	Tx	A85	Tx Data	B53	Ground	Data OUT
3	Data IN	B69	Rc	B69	Rec Data	B52	Data IN	Data IN
4	Ground	99	Req Snd.	A78	Req Send	B69	Ground	
5			Clr Snd.	A81	Clr Send	B54		
6	Data OUT	A85	DSR	B54	DSR	B40	Ground	DSR
7	+V	A83			GND	99	Data OUT	Ground
8	Data In Stg.	A87	Carrier	B52	Carrier	B38		Carrier
9	Ground	99						
10								
11			Stop W	A87	Int. Clk.	B67		
12								
13								
14								
15					Tx Clk	B34		
16								+5
17					Req Clk	B51		
18			DTR	A79	DTR	B49		DTR
19			Ring	B53	Ring	B36		Ring

NOTE: Because the 4026 uses the junction panel, only functions by pin are shown for the 4050 and 4051.

800, 1200 TYPE INTERNAL CABLES

CONN PIN NO.	4060*	4062	4073
	4061 TTY FUNCTION	4063 EIA FUNCTION	(Non-Auto-Ansr) FUNCTION
1	+5	GND	Ground
2	RDR RN	Tx Data	Tx Data
3	Rec. Data	Rec Data	Rec Data
4	Ground	Req. Send	+5
5		Clr. Send	Clr. Send
6	Ground	DSR	
7	Trans Data	GND	Ground
8		Carrier	
9			
10			
11			
12			
13			
14			
15			Tx Clk.
16			
17			Rec. Clock
18		DTR	+5
19		Ring	

* Only functions by pin are shown for the 4060 series.

800/1200 EXTERNAL CABLES

1019 EXTENSION CABLE

9 PIN (P)		9 PIN (S)
1	+5	1
2	RDR RUN	2
3	TT IN	3
4	GND	4
6	TT OUT	6
7	+V	7
8	DATA IN STOP	8
9	GND	9

1042A 4051 TO DEDICATED MODEM

19 PIN (P)		25 PIN (P)
2	DATA OUT	2
3	DATA IN	3
7	GND	1,7
17	+5	4,20

1043A 4029 TO DEDICATED MODEM

9 PIN (P)		25 PIN (P)
1	+5	4,20
3	RC DATA	3
7	TX DATA	2
9	GND	1,7

1017-A DEDICATED FULL DUPLEX MODEM CONTROL CABLE

9 PIN (P)		25 PIN (P)
1	MODEM STOP	4,20
2		
3	RC DATA	3
6	TX DATA	2
9	GND	1,7

1018-A AUTO-ANSWER MODEM CONTROL CABLE

19 PIN (P)		25 PIN (P)
1	GND	1
2	TX	2
3	RC	3
4	REQ TO SEND	4
5	CLR TO SEND	5
6	DSR	6
7	GND	7
8	CARRIER ON	8
11	STOP IN	7
18	DATA TO READY	20
19	RING	22

1020-A ADAPTER CABLE

19 PIN (P)		9 PIN (S)
2	OUT	7
3	IN	3
7	6	2,4,6
16	+5	1

1025-A 4015,4074,4073 NON-AUTO-ANSWER TO MODEM

19 PIN (P)		25 PIN (P)
1	GND	1
2	TX DATA	2
3	RC DATA	3
4	REQ TO SEND	4
5	CLR TO SEND	5
6	DSR	6
7	GND	7
8	CARRIER	8
15	TRANS. CLOCK	15
17	REC. CLOCK	17
18	DATA TER. READY	20
19	RING	22

4083 INTERNAL WIRING

(For 1210, 1220, 820 Processors Only)

4010/4023

	13 PIN (P)
+V A-83	1
TT OUT & TX A85	2
	3
RDR-RN A89	4
	5
	6
	7
+5 97, 98	8
GROUND 99	9
REC DATA B-69	11
GROUND	12
	13

4029

	13 PIN (P)
	1
A85 EX	2
B53 RING	3
B52 CARRIER	4
A79 DTR	5
A81 CLR SEND	6
B54 DSR	7
	8
99 G	9
B69 RC	11
A78 REQ TO SEND	12
99 GROUND	13

4026/4028

	13 PIN (P)
DATA OUT	1
GROUND	2
	3
RDR-RN (GROUND) 99	4
	5
	6
	7
+5 97, 98	8
GROUND 99	9
REC DATA	11
GROUND	12
	13

4026/4027

	13 PIN (P)
	1
TX DATA	2
	3
	4
	5
	6
DSR	7
98 +5	8
99 G	9
RC DATA	11
	12
99 GROUND	13

4015/4074

	13 PIN (P)
B34 TX CL	1
B53 TX	2
B36 RING	3
B38 CARRIER	4
B49 DTR	5
B54 CLR TO SEND	6
B40 DSR	7
+5	8
99 G	9
B52 RC	11
B69 REQ TO SEND	12
B51 REC CLOCK	13

4063 WITH 4026/4027

	13 PIN (P)
	1
TX DATA	2
RING	3
	4
DTR	5
CLR TO SEND	6
DSR	7
98 +5	8
99 GND	9
RC DATA	11
+5	12
GROUND	13

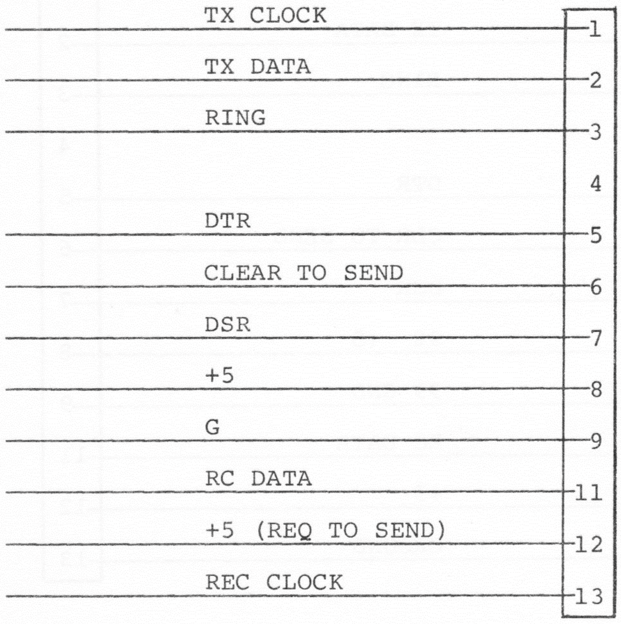
4061

	13 PIN (P)
DATA OUT	1
GROUND	2
	3
RDR-RN (GROUND) 1	4
	5
	6
	7
+5 97, 98	8
GROUND 99	9
REC DATA	11
GROUND	12
	13

4073 DEDICATED MODEM

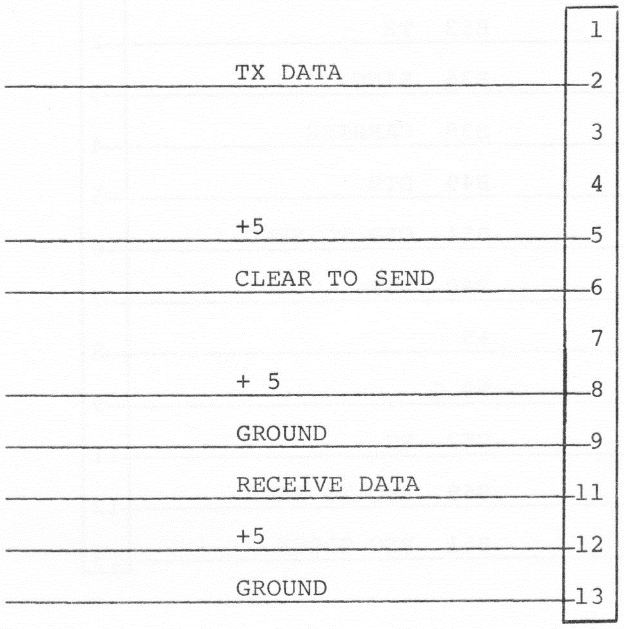
	13 PIN (P)
TX CLOCK	1
TX DATA	2
	3
	4
+5 (DTR)	5
CLR TO SEND	6
	7
+ 5	8
GROUND	9
RC DATA	11
+5 (REQ. TO SEND)	12
RC CLOCK	13

4073 AUTO ANSWER FULL-DUPLEX



TX CLOCK	1
TX DATA	2
RING	3
	4
DTR	5
CLEAR TO SEND	6
DSR	7
+5	8
G	9
RC DATA	11
+5 (REQ TO SEND)	12
REC CLOCK	13

4063

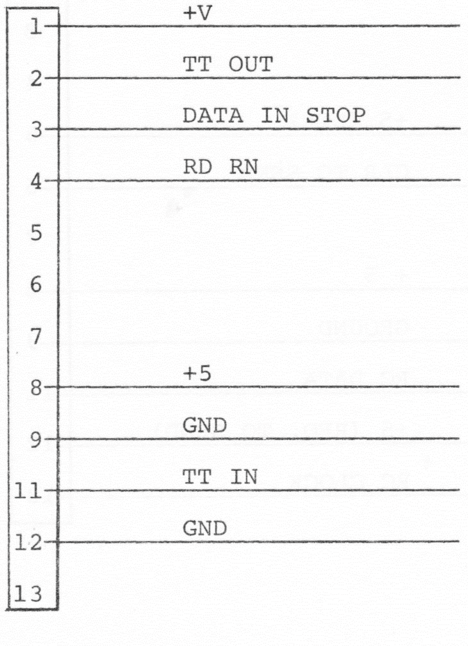


	1
TX DATA	2
	3
	4
+5	5
CLEAR TO SEND	6
	7
+ 5	8
GROUND	9
RECEIVE DATA	11
+5	12
GROUND	13

4083 EXTERNAL CABLES

TTY EXTERNAL CABLE

13 PIN (S)

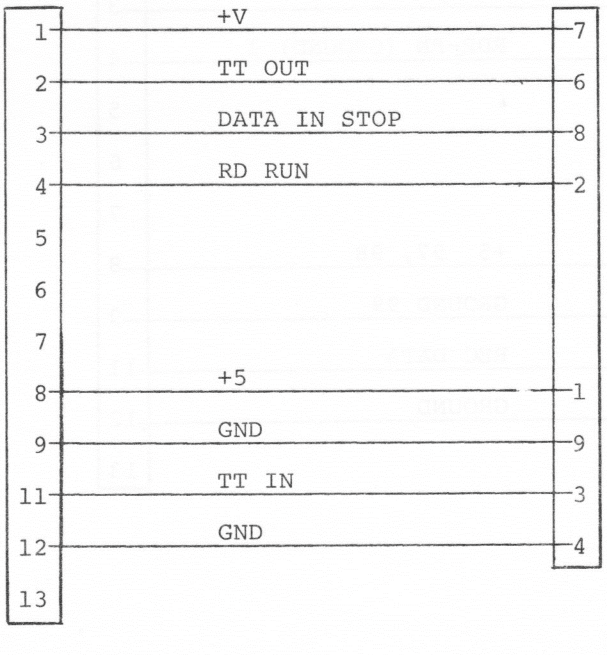


1	+V
2	TT OUT
3	DATA IN STOP
4	RD RN
5	
6	
7	
8	+5
9	GND
11	TT IN
12	GND
13	

Attached to Teletype Device, No Connector

1019-G TTY EXPANSION (33,35,37) AND 13 (S) TO 9 (P) ADAPTER

9 PIN (P)



1	+V	7
2	TT OUT	6
3	DATA IN STOP	8
4	RD RUN	2
5		
6		
7		
8	+5	1
9	GND	9
11	TT IN	3
12	GND	4
13		

1017-G MODEM CABLE FOR FULL-DUPLEX NON AUTO ANSWER

13 PIN (S)		25 PIN (P)
1		
2	TX DATA	2
3		
4		
5		
6		
7		
8	+5	4,20
9	GND	1,7
11	RC DATA	3
12		
13		

1048-G 13 PIN TO 19 PIN ADAPTER CABLE

13 PIN (S)		19 PIN (P)
1		
2	TX DATA	2
3	RING	19
4	CARRIER	8
5	DTR	18
6	CLR TO SEND	5
7	DATA SET RDY	6
8	+5	17
9	GND	7,1
11	RC DATA	3
12	REQ TO SEND	4
13		

1049-G MODEM CONTROL EIA CABLE 4029/4063/4026/4015/4074

13 PIN (S)		25 PIN (P)
1	TX CLOCK	15
2	TX DATA	2
3	RING	22
4	CARRIER	8
5	DTR	20
6	CLR TO SEND	5
7	DSR	6
8		
9	GND	1,7
11	RC DATA	3
12	REQ TO SEND	4
13	REC CLOCK	17

50 PIN PADDLE BOARD PIN DESIGNATIONS

# SIDE	SLOT SIDE PIN #	4010/23 FUNCTION	4029 FUNCTION	4015 FUNCTION	4026 FUNCTION	4060 FUNCTION
1	GROUND	GND	GND	GND	GND	GND
2	9 A 92				L9 OUT	
3	9 A 91				L10 OUT	
4	9 A 78		REQ SND		L8 DSR	L3 CLR SND
5	9 A 77				L11 DSR	L1 CLR SND
6	9 A 76				L10 DSR	L2 CLR SND
7	9 A 75				L12 IN	L0 CLR SND
8	9 A 73				L12 DSR	
9	9 A 71				L13 DSR	
10	9 A 69				L15 DSR	
11	9 A 67				L14 DSR	
12	9 A 65				L13 IN	
13	9 A 63				L14 IN	
14	9 A 61				L15 IN	
15	9 A 59				L12 OUT	
16	9 A 57				L13 OUT	
17	9 A 47				L15 OUT	
18	9 A 49				L14 OUT	
19	9 A 79		DTR		L9 DSR	
20	9 A 81		CLR SND		L6 DSR	
21	9 A 84				L5 DSR	TX 3
22	9 A 83	+V			L7 DSR	TX 2
23	9 A 86				L11 IN	TX 1
24	9 A 85	DATA OUT	TX DATA		L4 DSR	TX 0
25	9 A 88				L9 IN	RC 1
26	9 A 87	DATA IN STP	STOP W		L10 IN	RC 0
27	9 A 89	RDR-RN			L8 IN	RC 2
28	9 A 90				L11 OUT	RC 3
29	9 B 6				L8 OUT	
30	9 B 11				L7 OUT	
31	9 B 13				L6 OUT	
32	9 B 15				L5 OUT	
33	9 B 19				L4 OUT	
34	9 B 23				L7 IN	
35	9 B 25				L6 IN	
36	9 B 27				L0 DSR	
37	9 B 31				L2 DSR	
38	9 B 34			TX CLK	L1 DSR	
39	9 B 36			RING	L3 DSR	
40	9 B 38			CARRIER	L5 IN	
41	9 B 40			DSR	L4 IN	
42	9 B 48				L3 OUT	
43	9 B 49			DTR	L2 OUT	
44	9 B 51			RC CLK	L1 OUT	
45	9 B 52		CARRIER	RC DATA	L3 IN	
46	9 B 53		RING	TX CLK	L2 IN	
47	9 B 54		DSR	CLR SND	L0 OUT	
48	9 B 67			INT CLK	L1 IN	
49	9 B 69	RC DATA	RC DATA	REQ SND	L0 IN	
50		+5	+5	+5	+5	+5

50 PIN PADDLE BOARD PIN DESIGNATIONS (Continued)

# SIDE	SLOT SIDE PIN #	4074 FUNCTION	4073 FUNCTION
1	GROUND	GROUND	GROUND
2	9 A 92		
3	9 A 91		
4	9 A 78		
5	9 A 77		
6	9 A 76		
7	9 A 75		
8	9 A 73		
9	9 A 71		
10	9 A 69		
11	9 A 67		
12	9 A 65		
13	9 A 63		TX CL L2
14	9 A 61		
15	9 A 59		
16	9 A 57		
17	9 A 47		TX CL L3
18	9 A 49		RC CL L3
19	9 A 79		
20	9 A 81		RC CL L2
21	9 A 84		TX L3
22	9 A 83		TX L2
23	9 A 86		TX L1
24	9 A 85		TX L0
25	9 A 88		RC L1
26	9 A 87		RC L0
27	9 A 89		RC L2
28	9 A 90		RC L3
29	9 B 6		
30	9 B 11		
31	9 B 13		
32	9 B 15		RX CL L1
33	9 B 19		RC CL L1
34	9 B 23	2400 CLK	2300 CLK
35	9 B 25	1200 CLK	1200 CLK
36	9 B 27	19.2K CLK	19.2K CLK
37	9 B 31		
38	9 B 34	TX CL	TX CL L0
39	9 B 36	RING	
40	9 B 38	CARRIER	
41	9 B 40	DSR	
42	9 B 48		
43	9 B 49	DTR	
44	9 B 51	RC CL	RC CL L0
45	9 B 52	RC DATA	
46	9 B 53	TX DATA	
47	9 B 54	CLR SND	
48	9 B 67	4800 CLK	4800 CLK
49	9 B 69	REQ SND	
50	+5		

PADDLE BOARD

50 PIN EXTERNAL CABLES

1017-B FOR FULL-DUPLEX NON AUTO ANSWER MODEM CONTROL

50 PIN (S)		25 PIN (P)
1	GROUND	1,7
50	+5	4,20
24	DATA OUT	2
49	RC DATA	3

1018-B MODEM CONTROL CABLE FOR 4029

50 PIN (S)		25 PIN (P)
1	GND	1,7
19	DTR	20
20	CLR TO SEND	5
24	TX DATA	2
26	STOP W	7
45	CARRIER	8
46	RING	22
47	DSR	6
49	RC DATA	3
4	REQ TO SEND	4

1025-B 4015 & 4074 SYNCHRONOUS TO MODEM

50 PIN (S)		25 PIN (P)
1	GND	1,7
38	TX CLK	15
39	RING	22
40	CARRIER	8
41	DSR	6
43	DTR	20
44	RC CLK	17
45	RC DATA	3
46	TX DATA	2
47	CLR TO SEND	5
48	INT CLK	9
49	REQ TO SEND	4

50 PIN PADDLE BOARD EXTERNAL CABLES
4026 TO 4050/4051

52 PIN	FUNCTION	50 PIN
50,51,1	GROUND	
27	L9 OUT	2
28	L10 OUT	3
42	L8 DSR	4
45	L11 DSR	5
44	L10 DSR	6
14	L12 IN	7
46	L12 DSR	8
47	L13 DSR	9
49	L15 DSR	10
48	L14 DSR	11
15	L13 IN	12
16	L14 IN	13
17	L15 IN	14
30	L12 OUT	15
31	L13 OUT	16
33	L15 OUT	17
32	L14 OUT	18
43	L9 DSR	19
40	L6 DSR	20
39	L5 DSR	21
41	L7 DSR	22
13	L11 IN	23
38	L4 DSR	24
11	L9 IN	25
12	L10 IN	26
10	L8 IN	27
29	L11 OUT	28
26	L8 OUT	29
25	L7 OUT	30
24	L6 OUT	31
23	L5 OUT	32
22	L4 OUT	33
9	L7 IN	34
8	L6 IN	35
34	L0 DSR	36
36	L2 DSR	37
35	L1 DSR	38
37	L3 DSR	39
7	L5 IN	40
6	L4 IN	41
21	L3 OUT	42
20	L2 OUT	43
19	L1 OUT	44
5	L3 IN	45
4	L2 IN	46
2	L0 OUT	47
3	L1 IN	48
2	L0 IN	49
52	+5	50

APPENDIX 1

CONNECTOR PART NUMBERS

50 Pin Paddle Board Connector

Part Description	DGC Part #	AMP Part #
50 Dual Housing	111-000117	1-583717-7*
Key	111-000116	583274
Contacts	111-000115	583616

13 Pin Connector

Part Description	DGC Part #	AMP Part #
Housing	111-000147	86402-1*
Contact	111-000058	58969-2

20 Pin Board Connector

Part Description	DGC Part #	AMP Part #
Housing	111-000119	583717-1
Key	111-000116	583274
Contact	111-000115	583616

*Modified

ITEM	DESCRIPTION
1	P4 BACKPANEL SLOT 9
2	P5 PAPER TAPE READER OPTION 4011B
3	P6 EIA OPTION 4023
4	P7 PAPER TAPE PUNCH OPTION 4012A
5	4083 CONNECTOR ASSEMBLY OPTION
6	13 PIN(S) CONNECTOR
7	P2 TELETYPEWRITER INTERFACE CONNECTOR
8	50 PIN PADDLE BOARD

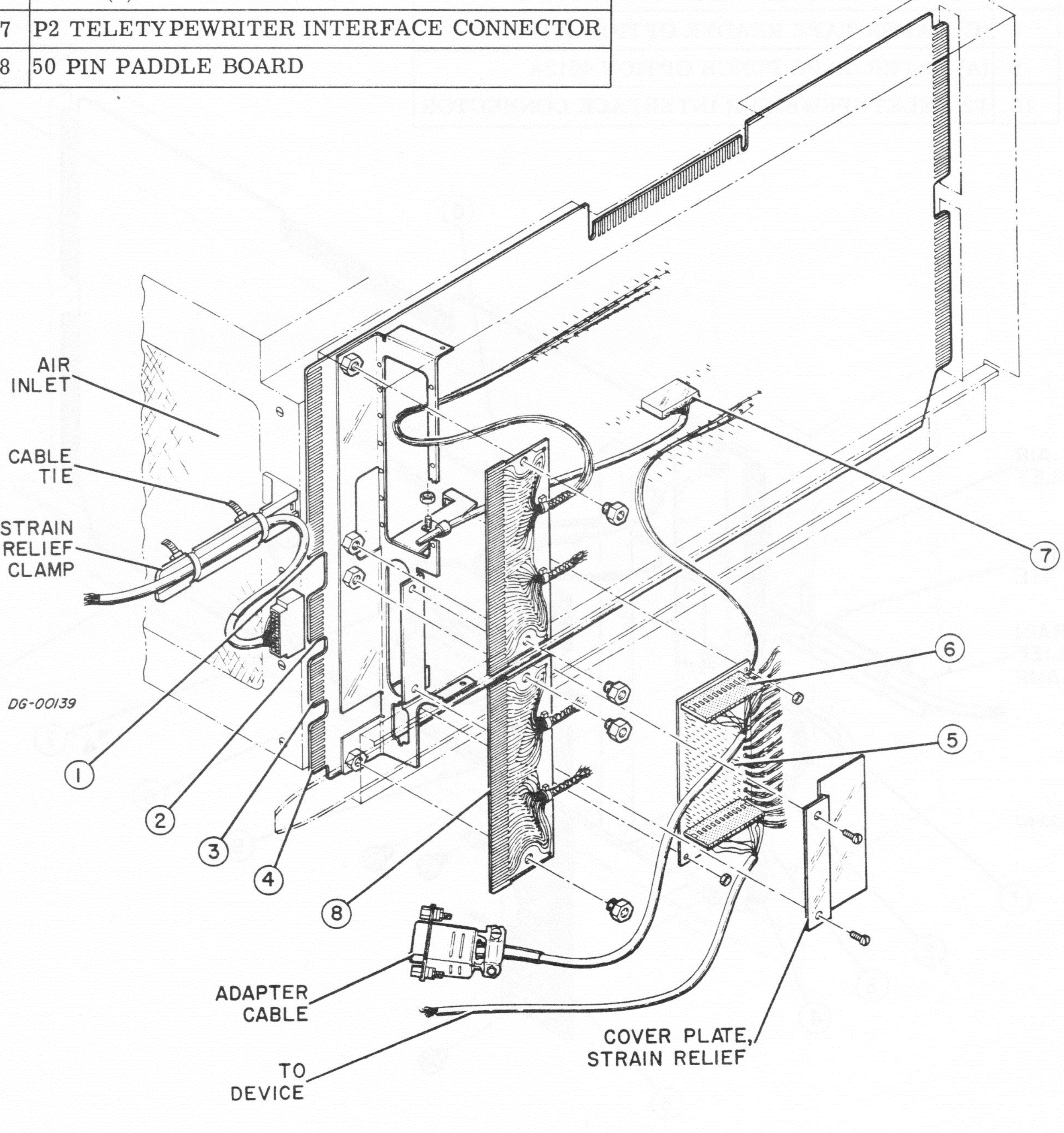


Figure 1 Sketch of the Nova 1220 & 820 Cabling Scheme. The 1210 Cabling is similiar, except it has half the capacity for connectors. Note that the 4083 Connector Panel is physically attached to the Processor.

ITEM	DESCRIPTION
1	P4 BACK PANEL SLOT 9
2	P5 PAPER TAPE READER OPTION 4011B
3	P6 EIA OPTION 4023
4	P7 PAPER TAPE PUNCH OPTION 4012A
5	50 PIN PADDLE BOARD
6	13 PIN(S) CONNECTOR ON EXTERNAL CABLE
7	4023 AND 4029 INTERFACE CONNECTORS
8	(C) PAPER TAPE READER OPTION 4011B
9	(A) PAPER TAPE PUNCH OPTION 4012A
10	P2 TELETYPEWRITER INTERFACE CONNECTOR

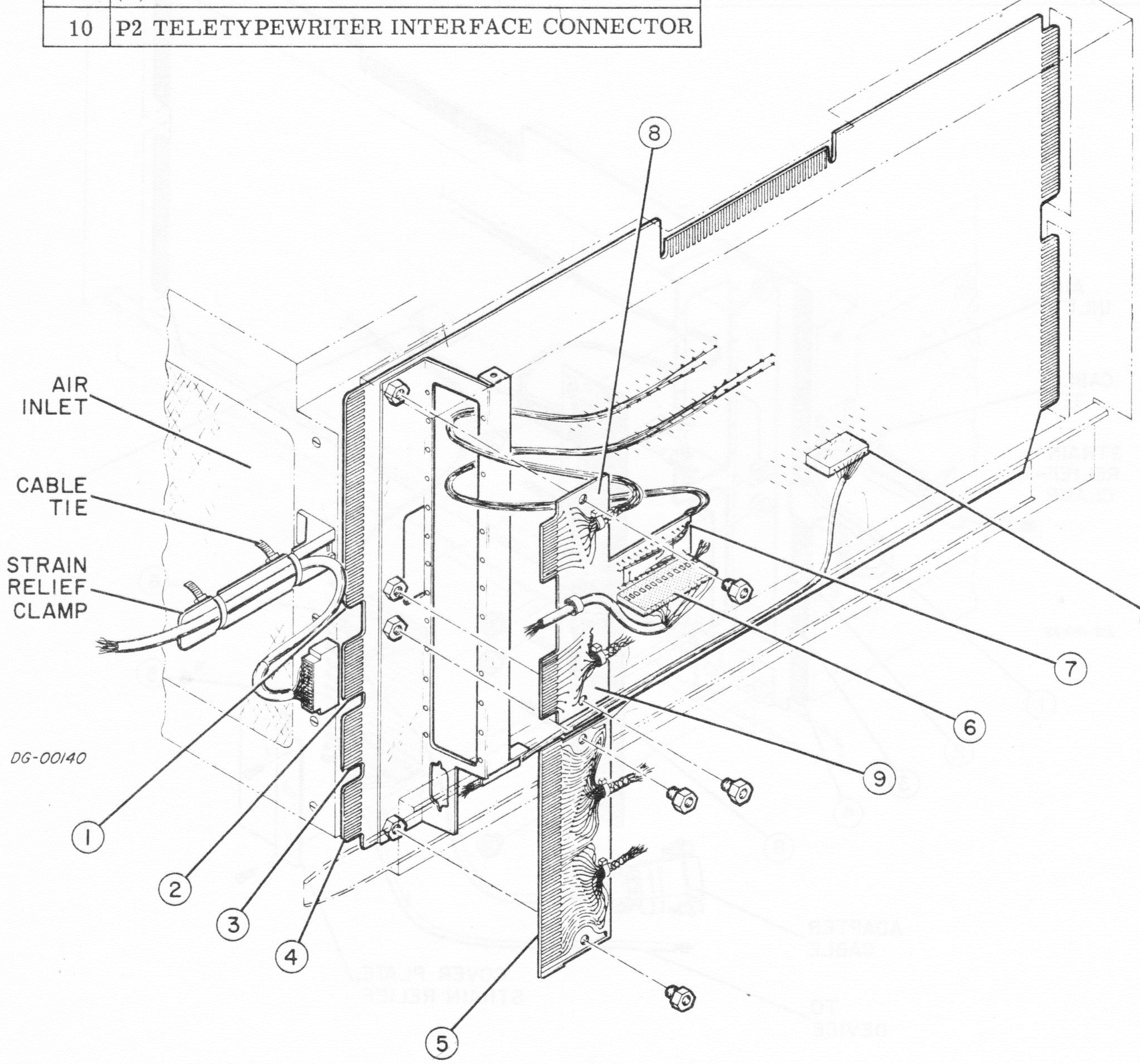


Figure 2 Sketch of the Nova 1220 & 820 Cabling Scheme. The 1210 Cabling is similiar, except it has half the capacity for connectors. Note the combination Paper Tape Reader, Paper Tape Punch and single 4023 or 4029 connector.

Data General

Engineering Publications Comment Form

Please help us improve our future publications by answering the questions below. Use the space provided for your comments.

Title: ____________________

Document No. ____________________

Yes	No		
☐	☐	Is this manual easy to read?	○ You (can,cannot) find things easily. ○ Language (is,is not) appropriate. ○ Technical terms (are,are not) defined as needed. ○ Other:
		In what ways do you find this manual useful?	○ Learning to use the equipment ○ As a reference ○ As an introduction to the product ○ To instruct a class. ○ Other:
☐	☐	Do the illustrations help you?	○ Visuals (are,are not) well designed. ○ Labels and captions (are,are not) clear. ○ Other:
☐	☐	Does the manual tell you all you need to know? What additional information would you like?	
☐	☐	Is the information accurate? (If not please specify with page number and paragraph.)	

Name: ____________________ Title: ____________________

Company: ____________________ Division: ____________________

Address: ____________________ City: ____________________

State: __________ Zip: __________ Telephone: ____________________ Date: __________

Data General

Data General Corporation, Westboro, Massachusetts 01581

FOLD *FOLD*

STAPLE *STAPLE*

FOLD *FOLD*

NO POSTAGE
NECESSARY
IF MAILED
IN THE
UNITED STATES

BUSINESS REPLY MAIL

FIRST CLASS PERMIT NO. 26 SOUTHBORO, MA. 01772

Postage will be paid by addressee:

DataGeneral
ATTN: ENGINEERING PUBLICATIONS

Southboro, Massachusetts 01772

Data General

users group

Installation Membership Form

Name ____________________ Position ____________________ Date ____________

Company, Organization or School ____

Address ____________________ City ____________________ State ______ Zip ____________

Telephone: Area Code ____________ No. ____________________ Ext. ____________________

1. Account Category

- ☐ OEM
- ☐ End User
- ☐ System House
- ☐ Government

2. Hardware

	Qty. Installed	Qty. On Order
M/600		
C/350, C/330, C/300		
S/250, S/230, S/200		
S/130		
AP/130		
CS Series		
N3/D		
Other NOVA		
microNOVA		
Other ____________		
(Specify) ____________		
____________		

3. Software

- ☐ AOS
- ☐ DOS
- ☐ SOS
- ☐ RDOS
- ☐ RTOS
- ☐ Other

Specify ____________

____

4. Languages

- ☐ Algol
- ☐ DG/L
- ☐ Cobol
- ☐ ECLIPSE Cobol
- ☐ Business BASIC
- ☐ BASIC
- ☐ Assembler
- ☐ Interactive
- ☐ Fortran
- ☐ RPG II
- ☐ PL/1
- ☐ Other

Specify ____________

____

5. Mode of Operation

- ☐ Batch (Central)
- ☐ Batch (Via RJE)
- ☐ On-Line Interactive

6. Communications

- ☐ RSTCP
- ☐ HASP
- ☐ RJE80
- ☐ SAM
- ☐ CAM
- ☐ 4025
- ☐ Other

Specify ____________

____

7. Application Description

○ ____________________

____

____

____

____

____

8. Purchase

From whom was your machine(s) purchased?

- ☐ **Data General Corp.**
- ☐ Other

Specify ____________

____

9. Users Group

Are you interested in joining a special interest or regional Data General Users Group?

○ ____________________

____

DG-05810

Data General

Data General Corporation, Westboro, **Massachusetts 01581**, (617) 366-8911

FOLD *FOLD*

STAPLE *STAPLE*

FOLD *FOLD*

NO POSTAGE
NECESSARY
IF MAILED
IN THE
UNITED STATES

BUSINESS REPLY MAIL
FIRST CLASS PERMIT NO. 26 SOUTHBORO, MA. 01772

Postage will be paid by addressee:

DataGeneral
ATTN: Users Group Coordinator

Southboro, Massachusetts 01772